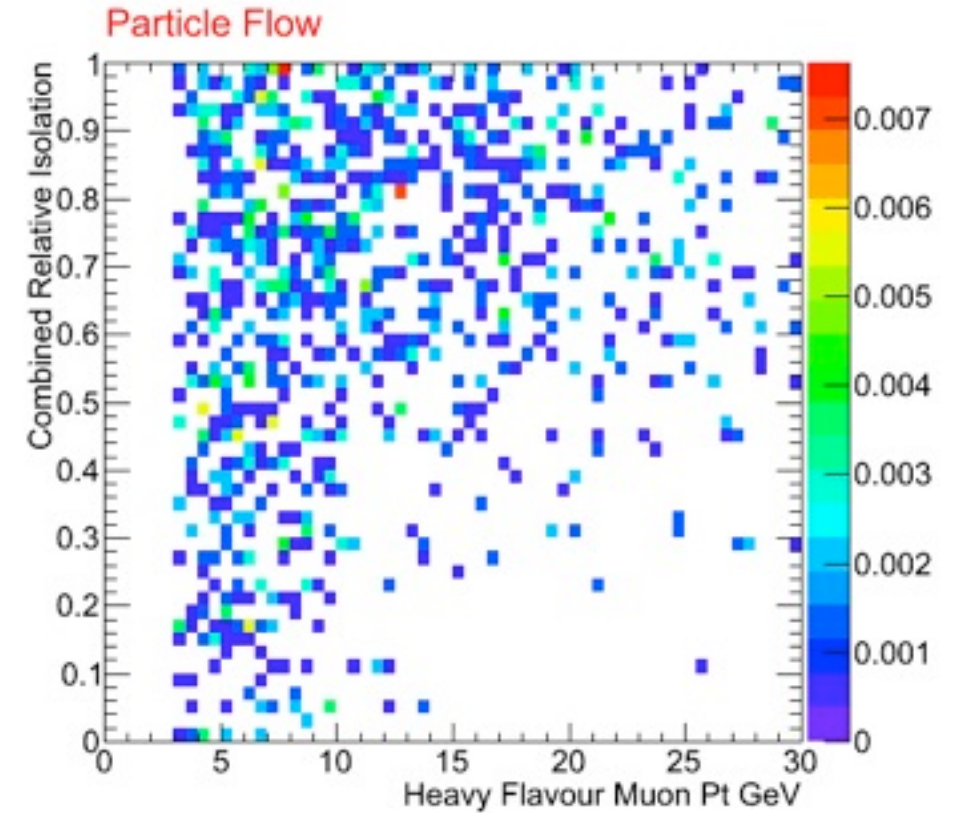
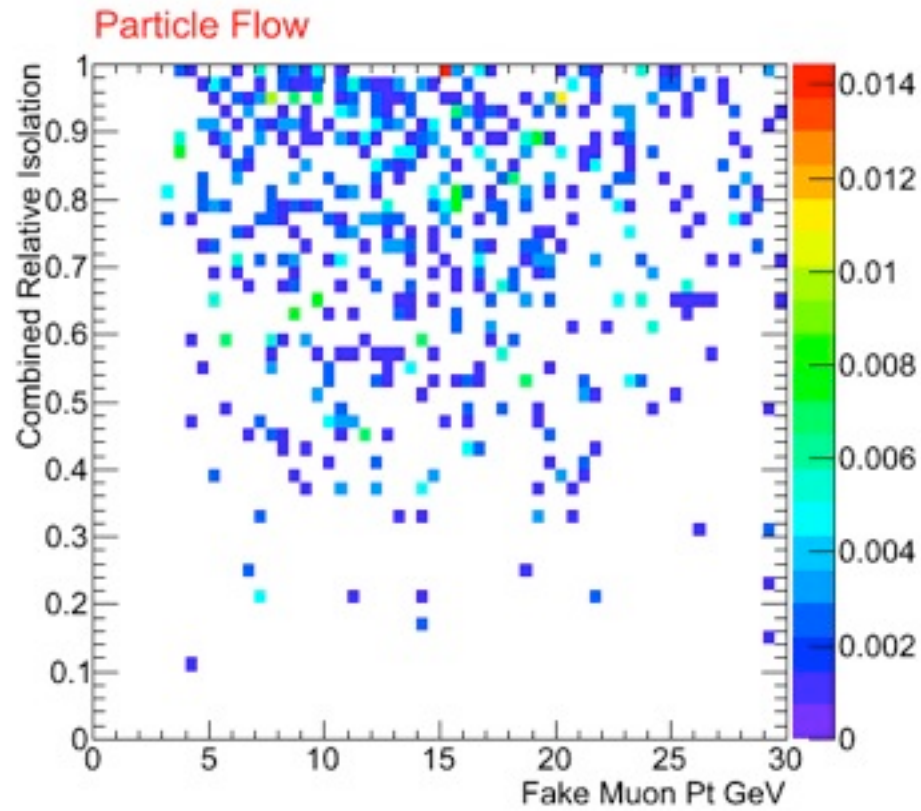


Determining soft lepton isolation properties using JPsi's and b-tagged leptons

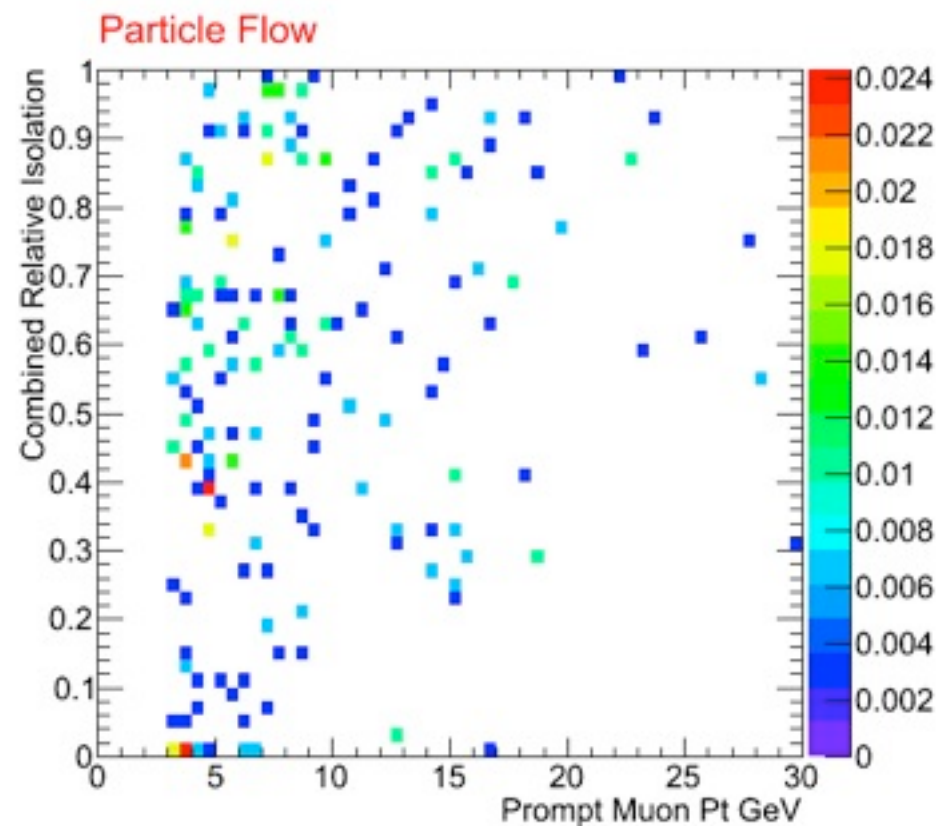
- We are using the jpsi reconstructed with muons (electrons) to select prompt leptons
 - We are using b-tagged leptons to obtain Heavy flavor leptons
 - We are so far simulating fakes for muons(electrons) using calmuons (electron anti-selection)
 - We are using only particle flow
-
- | | |
|---|--|
| <ul style="list-style-type: none">• For electrons the cuts are:<ul style="list-style-type: none">• Rejecting electrons with 0 or 1 hit in the inner pixels (conversions)• Requiring two opposite sign muons• Invariant mass of the pair in the interval (2 ,4) GeV• mva pf id > 0.3 for both electrons• The two electrons reconstruct a vertex with probability > 0.1 (reject non prompts)• pt >2 GeV, eta < 2.5• mva < 0 (electron fakes)• btag disc > 10 (impact parameter very tight) | <ul style="list-style-type: none">• For muons the cuts are:<ul style="list-style-type: none">• traker muon and global muon required• Requiring two opposite sign muons• Invariant mass of the pair in the interval (2 ,4) GeV• The two electrons reconstruct a vertex with probability > 0.1 (reject non prompts)• pt >3 GeV, eta < 2.4• match with a calomuon (muon fakes, basically pions)• btag disc > 10 (impact parameter very tight) |
|---|--|

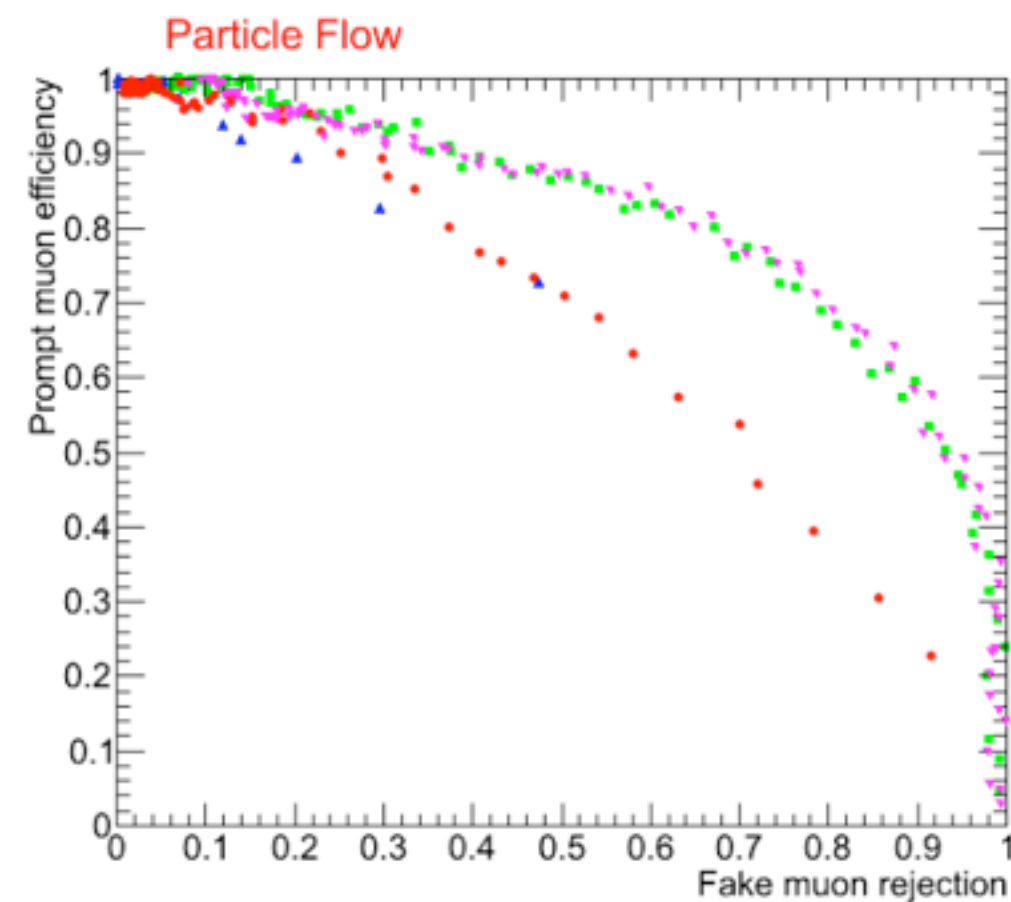
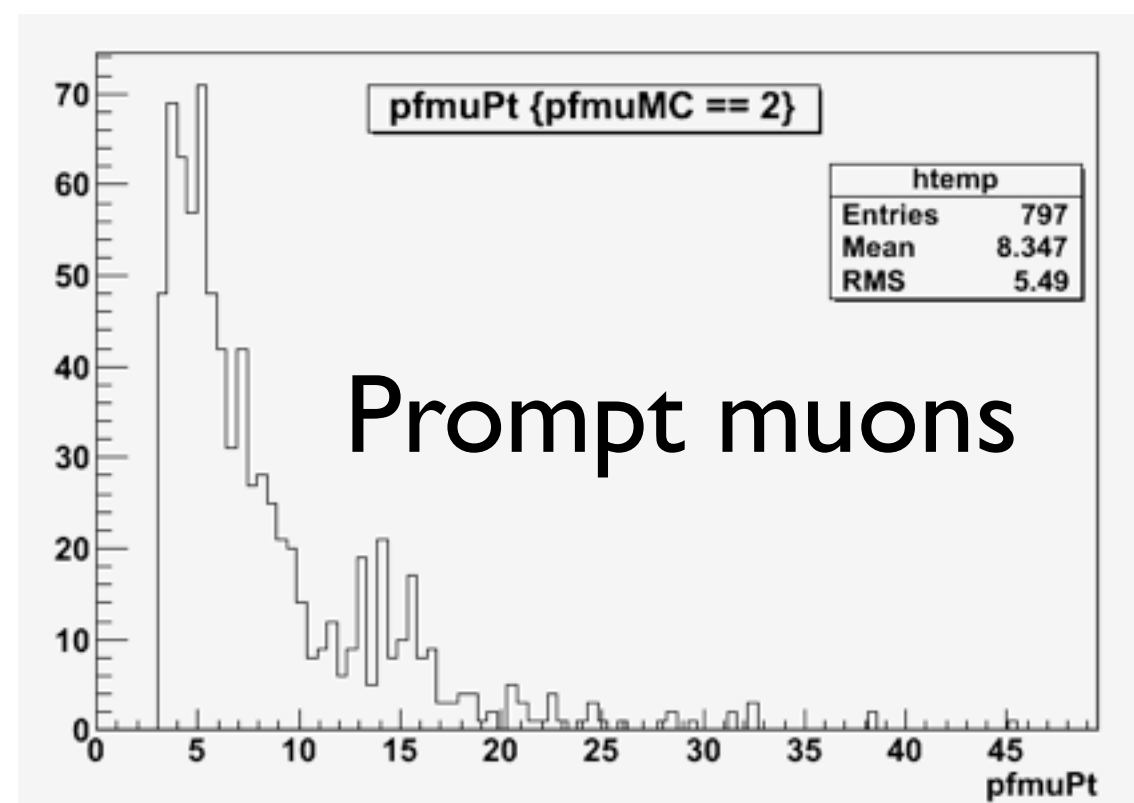
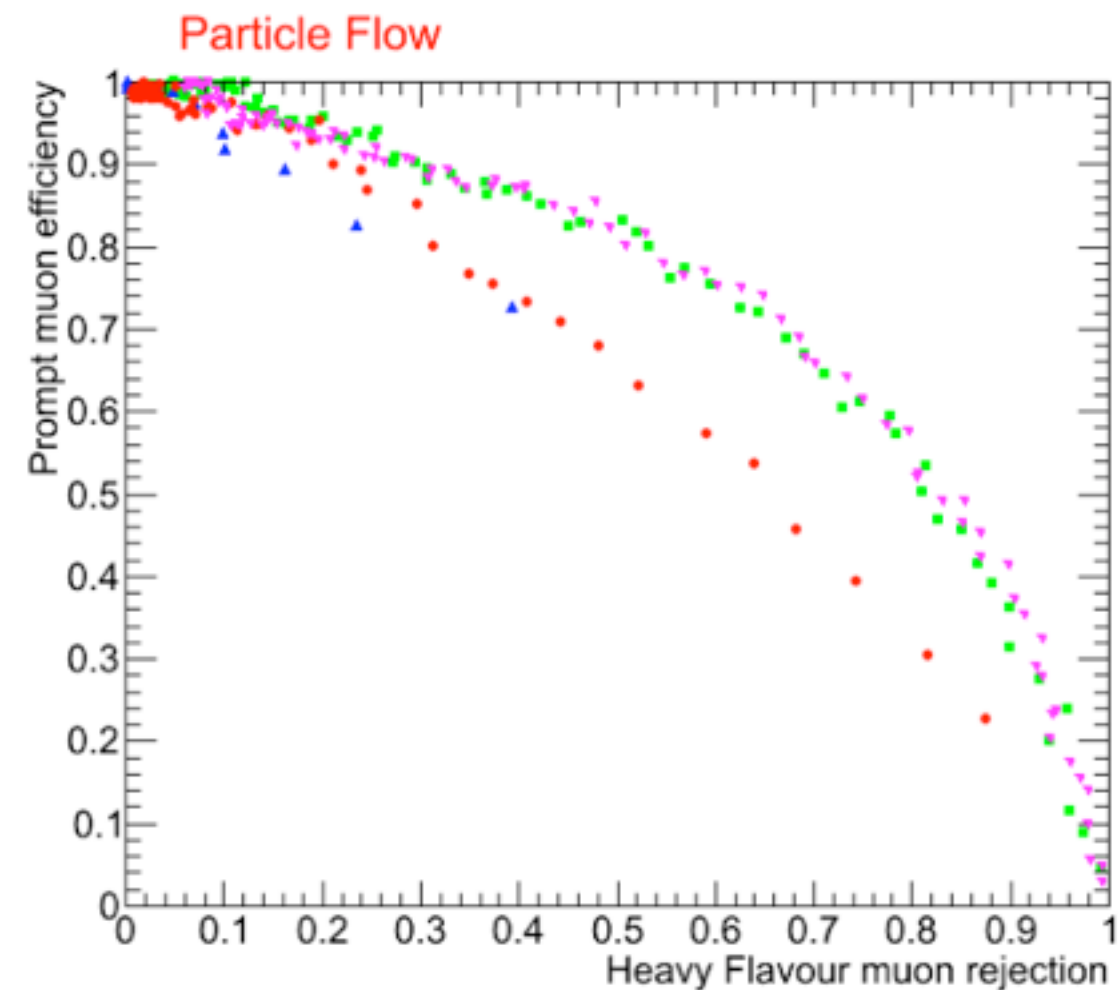
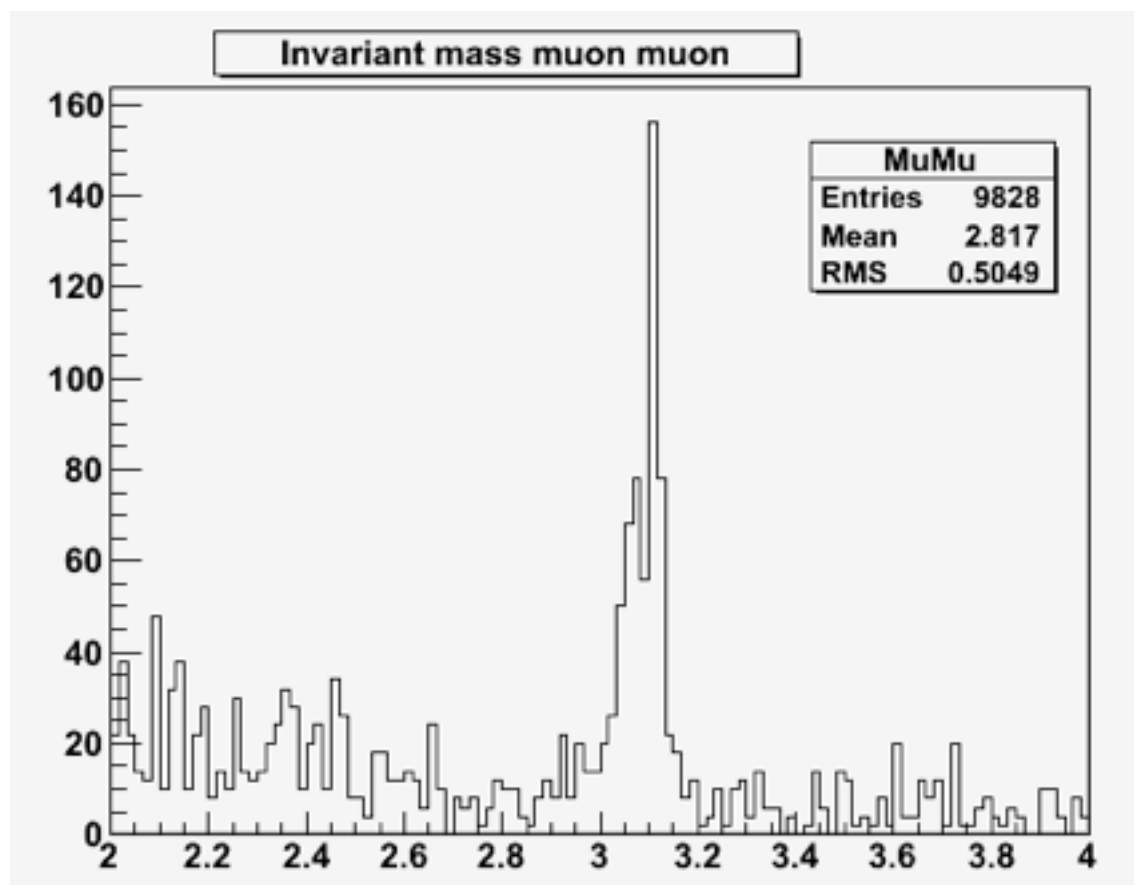
Plots done with ~ 0.5 pb - I



Muons

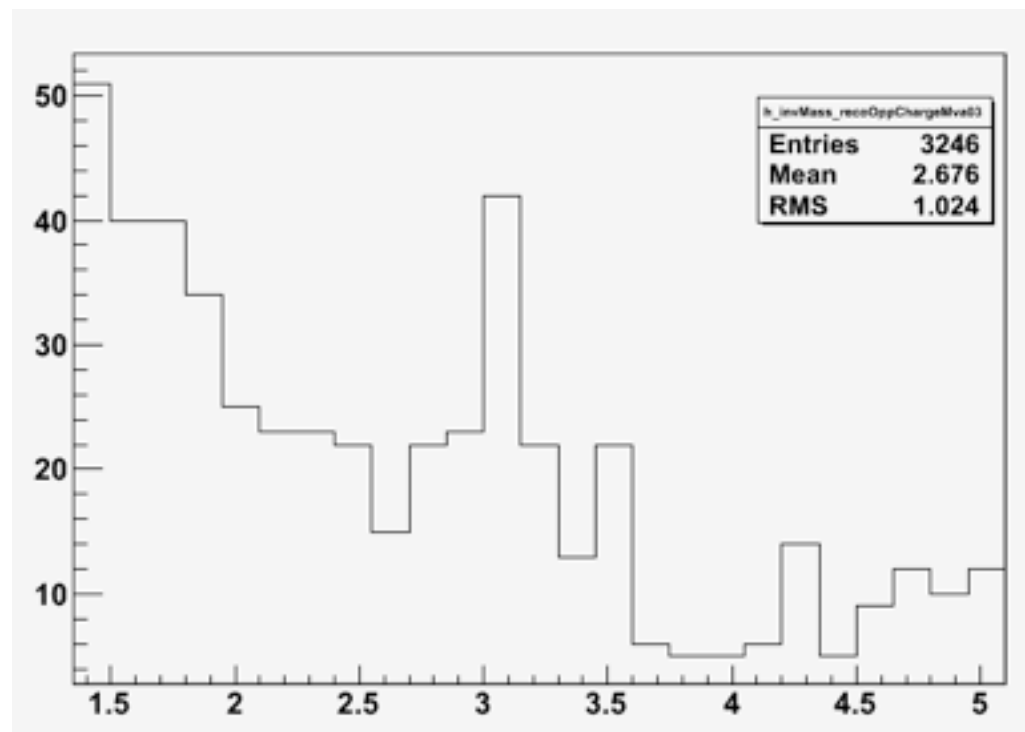
JetMetTau dataset



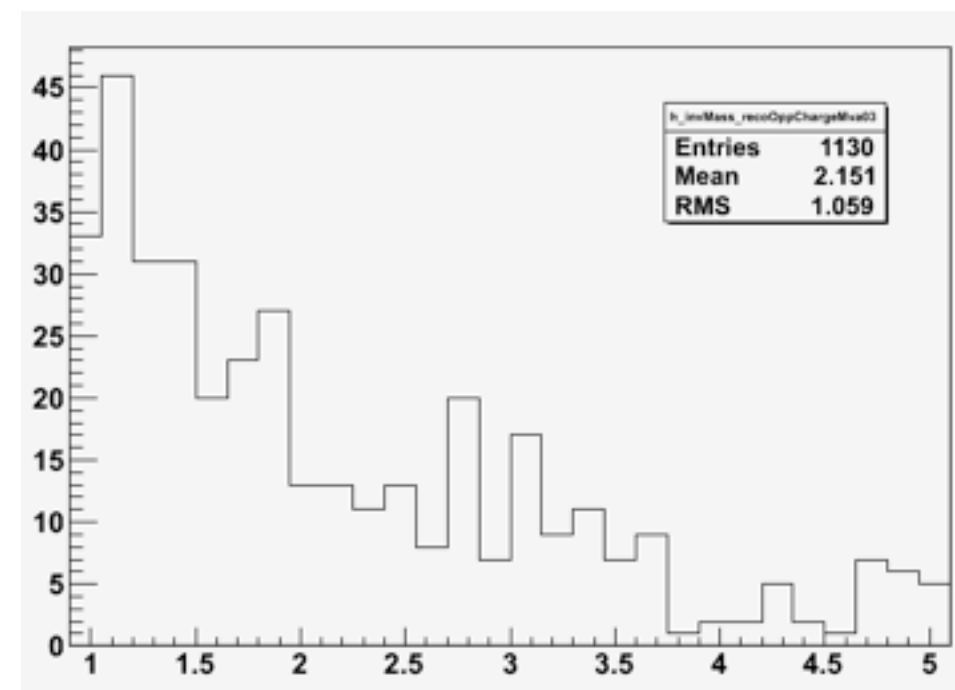


Electrons

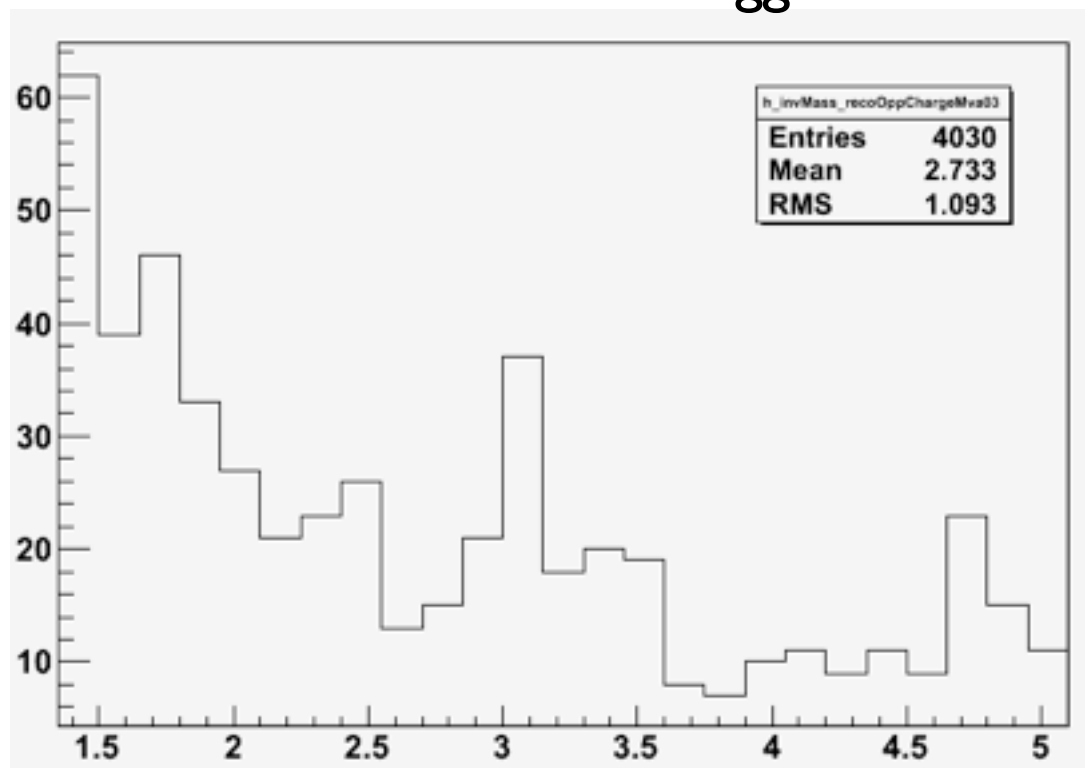
Daniele conversion rejection



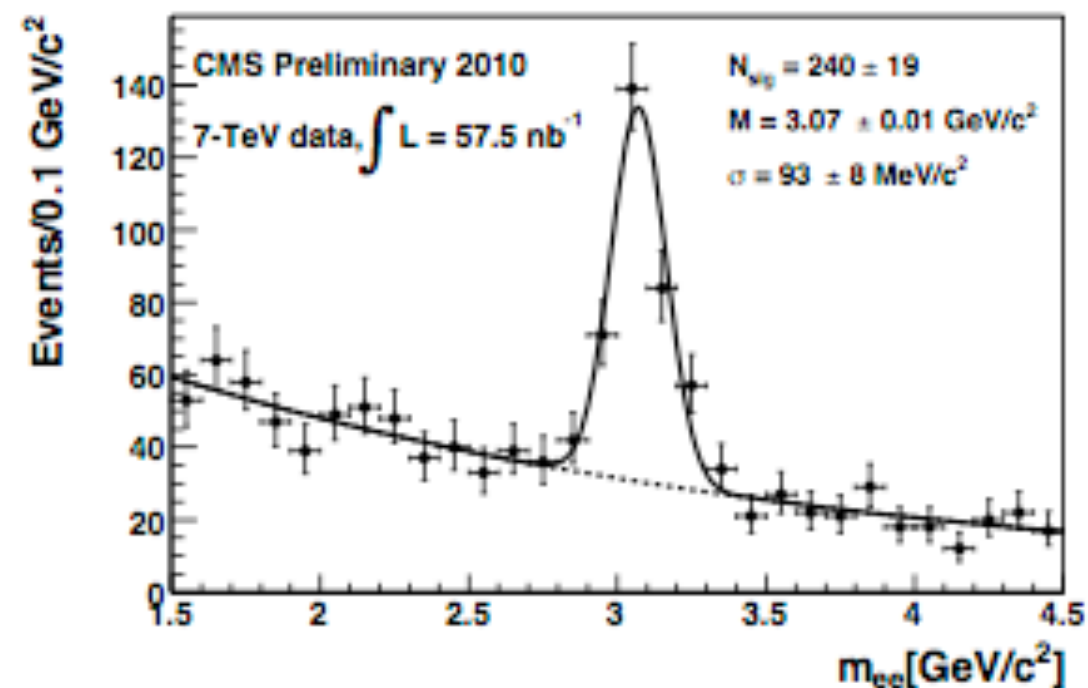
AN2009-159 conversion rejection method



Missing hits in the pixel detector > 1 for the track
then conversion tagged

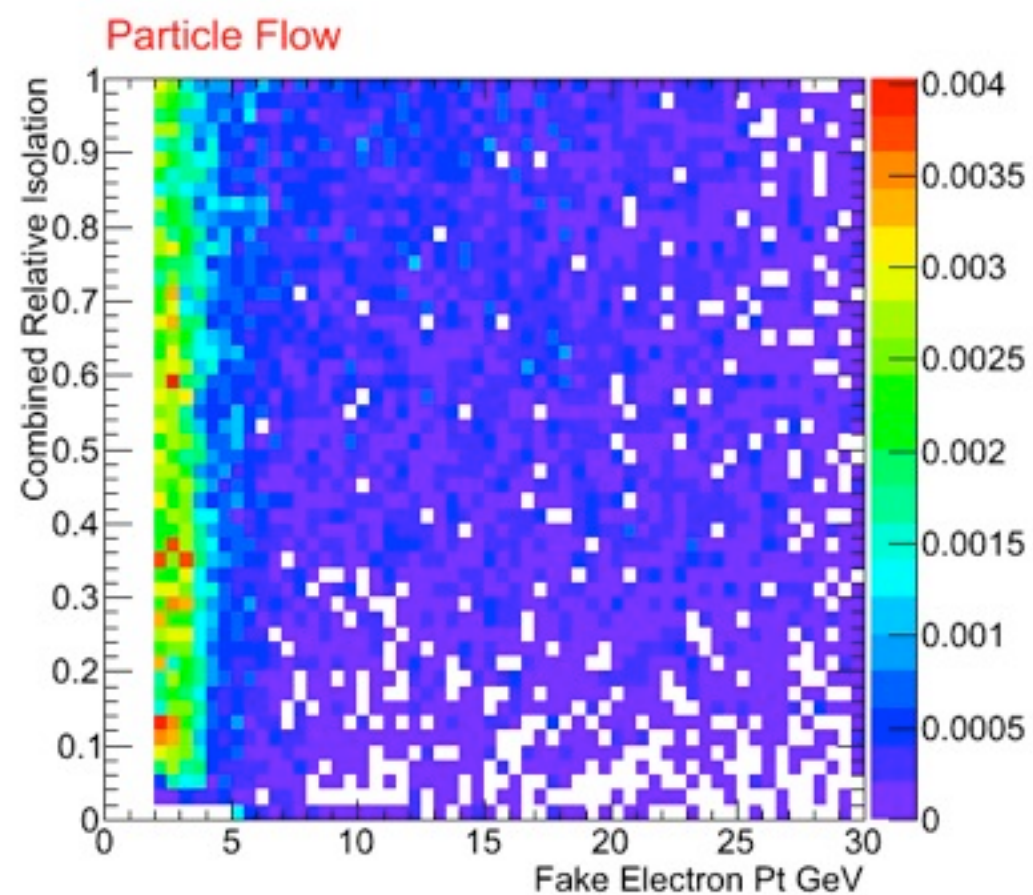


PFT-10-003-pas

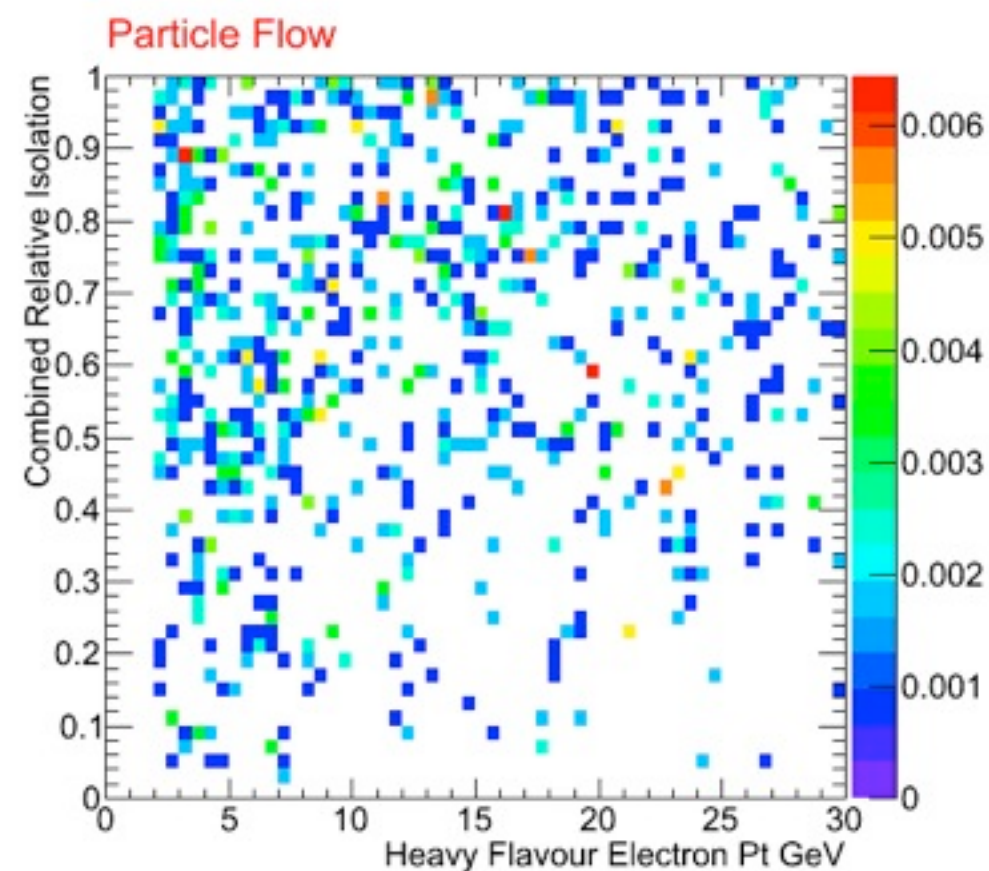


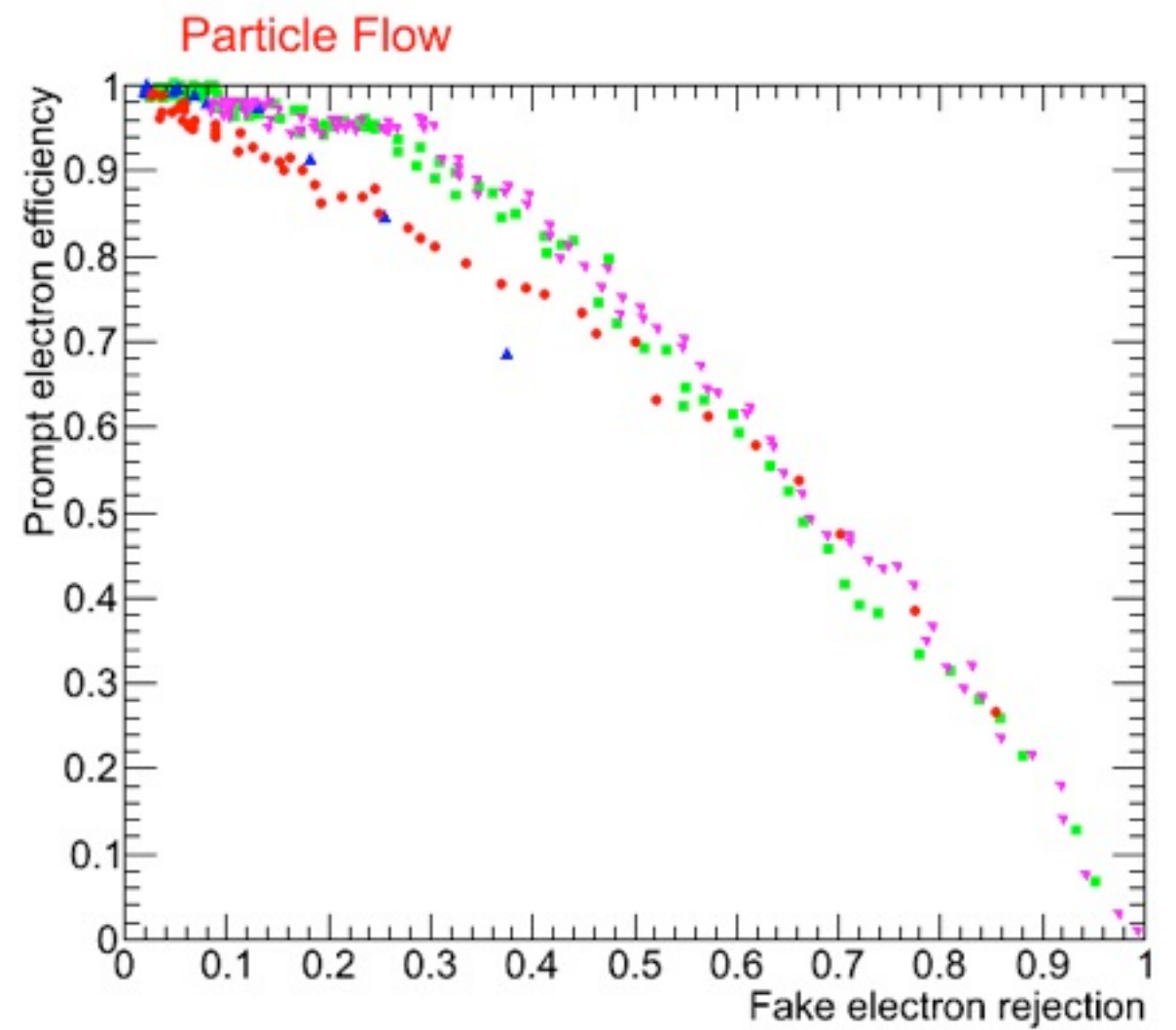
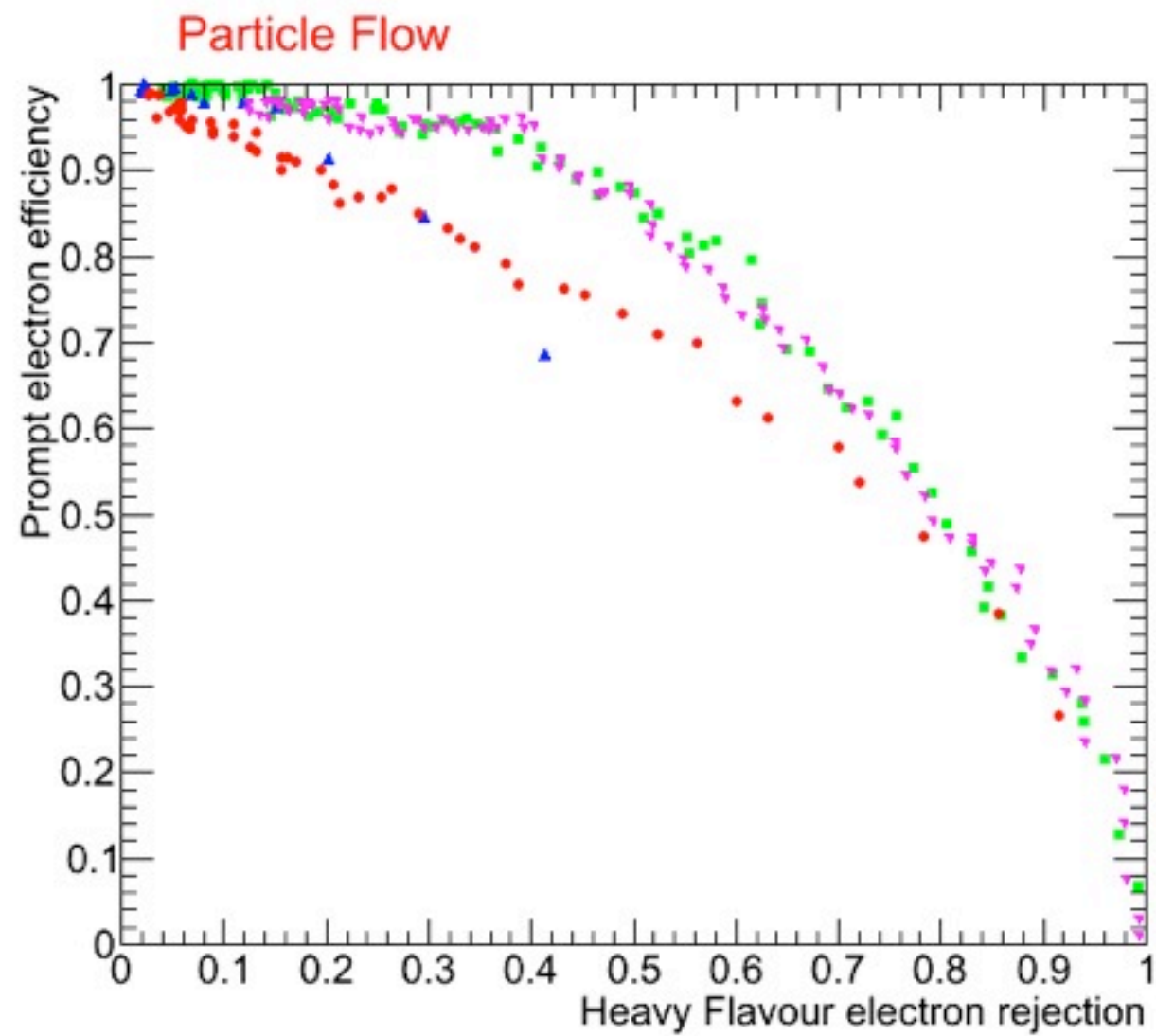
Requiring $m_{va} < -0.1$ and $d_0 > 0.2$ plot is empty

Requiring $m_{va} < 0$ fakes become everything



Btag electrons





Conclusions

- Still a bit of work is needed in the electrons fakes and prompts require improvement
- HT cut is set to 0 , we plan to increase this cut with more statistics
- Also the trigger still needs to be well chosen